

2016

Skin maps

Elizabeth Giorgi
Iowa State University

Follow this and additional works at: <https://lib.dr.iastate.edu/etd>



Part of the [Creative Writing Commons](#)

Recommended Citation

Giorgi, Elizabeth, "Skin maps" (2016). *Graduate Theses and Dissertations*. 15152.
<https://lib.dr.iastate.edu/etd/15152>

This Thesis is brought to you for free and open access by the Iowa State University Capstones, Theses and Dissertations at Iowa State University Digital Repository. It has been accepted for inclusion in Graduate Theses and Dissertations by an authorized administrator of Iowa State University Digital Repository. For more information, please contact digirep@iastate.edu.

Skin maps

by

Elizabeth Giorgi

A thesis submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of

MASTER OF FINE ARTS

Major: Creative Writing and Environment

Program of Study Committee:
Debra Marquart, Major Professor
Ned Balbo
Sean Grass
Jill Pruetz

Iowa State University

Ames, Iowa

2016

Copyright © Elizabeth Giorgi, 2016. All rights reserved.

TABLE OF CONTENTS

	Page
ACKNOWLEDGMENTS	iv
I: PLATE TECTONICS	
The Railyard	2
At the Mutter Museum of Medical Abnormalities	3
Mount Mitchell	5
Hiking the Olympic Coast	7
Diorama Hall	9
Child Soldiers	11
Namaste	13
Space Age	15
II: SKIN MAPS	
The Clay Eaters	19
Corner of Kutztown and Bellevue	20
Tornado Summer	22
Bingewatching	23
Babysat	24
Elementary Education	25
<i>The Dreamlife of Angels</i> (1998): Scenes	26
III: EXPERIMENTAL METHODS	
Mangos	28
Worries	29
Population Viability Analysis	31
Milk	33
Experiment	34
Morning Glory	46
A Practical Field Guide for Researchers Handling a Break-Up	47
IV: WEATHER SYSTEMS	
Prairie	50
Registered Paint Horses for Sale	51
Puget Sound	52
Bioluminescence.....	54

Rocky Mountain National Park	56
3-D Modeling	57
Bush Baby, You	58
Fossil Hunting	61

ACKNOWLEDGMENTS

I would like to thank my committee chair, Debra Marquart, and my committee members, Ned Balbo, Sean Grass, and Jill Pruetz, for their generous feedback, guidance and support throughout the writing of this thesis.

In addition, I would also like to thank my friends, colleagues, the department faculty and staff for making my time at Iowa State University a wonderful experience. I would like particularly to acknowledge the contributions of Michelle Donahue, Samantha Futhey, and Corrina Carter, whose insights were invaluable in the shaping of this manuscript, and the following individuals for their feedback and support: Lindsay Tigue, William Bonfiglio, Adam Wright, Dana Thomann, Chloe Clark, Erin Schmiel, and Andrew Payton.

PLATE TECTONICS

THE RAILYARD

Like stitches
or
a zipper's
interlocking teeth

the tracks
laid
down
the seam
of the city

that it once
held
to gether

AT THE MUTTER MUSEUM OF MEDICAL ABNORMALITIES

Beside the sewing cabinet,
its drawers stuffed full

of buttons, pins and needles
unstuck from the soft wet pin-
cushion of human throats;

beside the book bound
with human skin, the hanging
skeletons with giant
limbs, the brains sliced thin
through hundred-year-old memories,

hidden behind the label
fetal abnormalities:
the row of dusty jars, formaldehyde
wombs cradling slumped, fish-eyed bodies
with skin a patchwork quilt,
unfinished.

In some it splits along the spine,
silk-thread nerves exposed
to amniotic wash; in others,

it's missing the final downy patch
to cover the brain, the heart.

Unviable, the sign
says. But people find ways to live
with all sorts of things. I once heard

of a woman who swallowed
knives whole. It was an act
of love: the knives a talisman she carried,
believing they kept
her mother safe, somehow.

Even when surgeons sliced
open her stomach, removed
that jagged-edged tumor
she'd cultivated like a garden—
she believed. She kept
swallowing.

She would grow
a dozen tumors for love.

Now I wonder—as I drag my feet
along the floor, as I look away
from never-opened eyes—
what these mothers felt,
when delivered of them.

Did the women love them
anyway, whose bodies rejected
their penetrating spines,

their overflowing hearts?

MOUNT MITCHELL

In July I drive to visit Lindsay on the mountain. Blooming coneflowers and Queen Anne's lace reverse to buds as my car climbs the switchback roads to the peak, tallest point on the East Coast. We pitch a tent in the small campground of the park where she works. It feels like the end of the world: no cell phones, no internet, no cable, no satellite service, the hills below us rippling out to the horizon like curved sheets of blue glass. The next day when we hike the old railbed that hugs the mountain's curve, we can see the campsite, the barracks, above us. If we were still up there we would be specks, or less. Indiscernible, swallowed by sky.

I would be lonely here, I say. Lindsay says she likes the calm.

Every walk is a hike. She tells me that when she first moved here, her legs were blocks of pain. The mountain sculpts you, hardens the muscles of calf, torso, thigh. She still wakes at night with electricity radiating through her nerves.

Lindsay tells me how her roommate in the barracks has lived in these hills her whole life, the way her parents did, and her grandparents, and countless generations before them. In the spring she collects wild plants to sell. In the summer she works part-time at the park. In the winter she lives snow-buried, hunkered down in a house of mountain stone built by some ancestor, generations-dead. Less than 40 people live in her hometown, Lindsay says; she married one, a childhood playmate who works odd jobs, like her, construction, road crews.

Some nights the roommate's husband calls the barracks landline. Lindsay tells me how she's learned to lie if her roommate is out. She tells me about the times he's twisted her roommate's arms out of their sockets, cracked the bones, spread bruises along her face.

Why would you live like that, I ask.

She knows how it seems to outsiders, Lindsay says. She could leave. Not just him, but the mountain, all of it, scratch out a life elsewhere. She chooses not to.

I want to say that I don't understand. But that would be a lie.

When I was a girl I lived in an old stone farmhouse on the side of a mountain. In summer, storms boiled up over the ridgeline. The morning after, the woods around

us would be littered with trunks, huge old trees cracked by wind or toppled, pulled loose from wet soil by their roots.

Beside our house my parents had planted a sapling, and with each storm I worried fiercely for it, watching out the window as the wind grabbed it by its slender limbs, pulled it low toward the ground. My mother tried to reassure me: That tree is young, she said. It still knows how to bend.

That night a cloud shrouds the mountain, blocking our view of surrounding hills, obscuring even the next site over. It's too wet for a fire, too cold to stay up. Instead we go to bed.

I listen to Lindsay's breathing, and think how nothing is ever as simple as we say it is. Leave, stay. I think how sometimes what we want is to be broken along familiar faults. Sometimes what we want is to be reminded that we can heal.

HIKING THE OLYMPIC COAST

We start at low tide, sea a salt-water table
resting a mile from shore. Tangled kelp
heaps in crevices of stone seabed, marker

of night's high point, its dismantling the cathedral
of flies which cloud the interval between high and low
water. Interlopers, Tony and I

shoulder nylon packs, tide charts, boots
puckering the cushion of sand between
seabed and treeline. Pushed against the living,

a hem of trunks smoothed by water, bone-
bleached and massive-tusked, their ringed interiors
wordless timekeepers of rain, tides, seasons.

What are centuries here? The afterthoughts
of people long gone. We break for lunch
by fallen rocks inscribed with ship sails,

directional crosses. *Disease*, the guidebook
says. No language exists for them anymore,
these people who charted the course

of those who delivered their destruction.
I run my fingers along the crosses.
We need it—direction—even they

who never lived to meet the men
whose course they charted. I wonder: did
they recognize in wind-filled cloth

and fitted plank, the work of men?
Or did they believe it something else
that surfaced on the water? This place

a hundred years unmapped. After lunch
we set off again, balancing on trunks more stable
than sand. Offshore, the muffled din of birdsong

rises from an island, cliff-sided. *Sanctuary*, the map
says, *forbidden passage*. The incoming tide makes mirrored
sentinels of rock outcroppings, unbridges

them from shore. Against their gray, brown
specks of sea lions sunning in the impassable
distance. We can hear them, faint over the gush

of wave reclaiming stone, swallowing flies.
They call to one another, back
and forth across the water.

DIORAMA HALL

I.

Wolves stuck forever teeth-bared,
 lions crouched behind dried grasses
 that merge with painted backdrop. Glass
 separates this from that—and that,
 a nightmare, if not for glass. In the nowhere
 of reflected space our own bodies
 superimposed on theirs, wandering savannah,
 snowdrift, time capsules populated with wax-museum
 figures and our own shadow-box doubles,
 wilting, sweat-damp backs sticky
 in antiseptic air conditioning.
 Four buffalo, short-grass prairie, the herd
 painted in behind them ten-thousand deep
 to an imagined horizon. *The last wild buffalo*
 reads the plaque. Captured by a taxidermist
 on some Western plain, transported,
 resurrected, in this funhouse simulacrum.

II

And in the shadowbox of firing synapses I picture
 the scene: how it must have been for the man who collected
 them. Like Revelation, like the end of time had been reached
 and the map had no fixed points anymore, just blurry outlines

of forms, watery shapes squinted at against a bright sun.
 A bull, two cows, a calf. Somewhere behind him—a train
 station, a matchstick town square—piles of pelts drying
 in the sun, wet with blood and connective

tissue, a hill of skulls rotting eyeless, flocks
 of crows, wordless tongues cut out for the novelty
 of their heft. The bull snorts, forces air from huge lungs,
 pulsing soft nostril membrane. He flicks an ear, fine hairs

catching wind. He turns his great head. The rifle report.
 They fall. One two three four.

III

No connection left, just hide,
sawdust stuffing, wooden frame. I reflect,
like a double exposure, on the glass.

The bull's glass eye reads the future
like tea leaves. One day, it says, this leather
will crack, this glass eye pop out, and the whole
thing collapse in on itself: a heap of dust,

a cloud that settles, finally.

CHILD SOLDIERS

The backdrop to voiceovers
in videos, documentaries—
an illustration of some esoteric

point about life, violence, the otherness
of suffering. A man says, *They came*

*in the night. They told
our mothers we were going
to university. They took us*

with them. The voice stops
but the boys go on

marching: lining up in rows, saluting,
army-green shirts hanging from bird-
light shoulder blades, thin

straight frames. You are meant
to see them doe-eyed, camera-ready

victims, to read the contrast
between baby faces and machine-gun
accoutrement. But instead you think

how at home they look, already:
fierce eyes measuring camera,

the self-assured weight of assault
rifles on their backs. And you think
of the corner boys back in Philly:

the hoppers with their corn rows
and close-cropped curls, owning

their street corners, eyes measuring you
driving by in your candy-bright
hatchback, voices calling: *the fuck*

you looking at, bitch? You think
of their sneakers, their sagged

jeans and long, cotton-white shirts,
their snatching from the cloud
of film and TV and car speakers

some ragged portrait
of manhood. Their friends

laughing. The fierce uplift
of belonging. The cracked
and fractured cloud-spill of light.

NAMASTE

the woman
at the grocery store
who can't figure out
the self-checkout scanner, and
the clerk, who
can't be bothered
to look up
for five seconds
to help her while
she swipes the
carton of milk
across the glass
again and again, and
the man behind you
who keeps trying
to cut in line, and
the woman reading
tabloids instead
of paying attention, and
the people blocking
the aisle like they're
the only people
in the whole fucking store—
it's hard to remember,
sometimes,
that we're all these
perpetual motion machines,
fueled by the internal
combustion of yearning
mixed with doubt, hearts
half-full of un-homogenized
insecurities and hopes
waiting to curdle
or be churned—

yes,
even me,
even you, always
caught these days between

ringing alarms
and elevator bells,
a moth beating
its wings between
panes of glass.

SPACE AGE:¹*A Radio Play*

Transmission begins.

Night. Somewhere in Italy, homespun receivers catch radio frequencies, trace the orbit of sound across the black backdrop of sky.

Five...four...three...two...one...come in...

This is not a satellite: not one of those metal moths lodged in the concentric push-pull spin of motion and gravity, bouncing back the already-known with a two-second delay.

Listen...listen...come in...our transmission begins now...

This is an unknown: the Russian alto like a melody crackling out of old speakers, voice beading down invisible wavelengths like strings knotted between cups. 1963. Our atomic morning:

Forty-five...fifty...how should I transmit...

the cups in my grandmother's kitchen are etched with golden atomic starbursts—symbols of a geometric future, stitched together with invisible string: waves, bonds, lines of attraction,

¹ In the 1960s, two Italian amateur radio operators claimed to have discovered the radio frequency used by the Soviet space program to transmit communications between cosmonauts and ground control, and to have recorded transmissions of human voices and vital signs from supposedly unmanned flights. The dialogue above comes from one such transmission. The Soviet space program is known to have covered up failed missions resulting in cosmonaut deaths.

I feel hot...What?...Talk to me...

the push-pull orbit of electrons and protons,
locked together like planets and their stars.

Isn't this dangerous? It's all...yes...

1963. We know the power
of those bonds, severed: leveler of cities. In deserts
we repeat the tests, just to see
again and again what we are capable of:

Yes...breathing...breathing...oxygen...oxygen

columns, sand clouds' sudden blooming;
this new age, clothed in synthetic
fibers, teasing apart the fuel of stars.

Yes...forty-one...how should I transmit?

In deserts too, deep white dishes
whir, following the frequency
of dust, debris—cosmic castoffs—
anticipating the sound of something
more.

Shift scene.

Thirty-two...thirty-two...Isn't this dangerous? It's all...yes...

On the wall-length cabinet
in my grandmother's living room, Glenn
Miller perches on the edge of tomorrow,
leading his ghost orchestra
through needlepoint etchings:
vinyl spirals. Narrowing rotations.

forty-one...I feel hot...yes...I will re-enter...

Flip a switch: on the radio Paul is asking
a hundred thousand girls to

love, love me and they do—they do
believe *love is all you need*.

forty-one...I feel hot...I will re-enter...

They do believe in geometric
lives, in better living through
science, in Bakelite plastic promises.

Turn the radio dial

I feel hot...I can see a flame...

and on another frequency
the woman in her tin can dips
into earth's atmosphere, cutting
the surface tension, stirring
the swirl of atoms,

Am I going to crash?...What?...Talk to me...I feel hot...

pulling herself apart.

Transmission ended.

In her bedroom, my mother opens
four-year-old eyes. It's morning:
hear the birdsong, the flap
of laundry drying on the line.

II

SKIN MAPS

THE CLAY EATERS

Field song of the colored girls, Sleighton Reformatory Farm School, 1925

Our grandmothers ate
dirt cut from hillsides, sliced
thick in spring, fried
in hog fat, splashed
with vinegar. They worked

fields, dirt coating
tongues, bellies taut
as mules. Our tongues remember
tartness: mineral bite
of copper, iron, soft taste

of rain. Here, we ruddy
our arms in soil, spread
roots like fraying
rope, coax
milk into the pail. We coat

our tongues in stories, sing
half-remembered songs. We wait
for spring to warm
us, for roots to break
through stone.

CORNER OF KUTZTOWN AND BELLEVUE

Me and Megan Matusek, slumped low
 in the front seat of a tan Nissan sedan
 parked in a corner of the Ghetto Mart lot, hiding
 from the Pakistani clerk behind the counter,
 his bullet-proof glass pushed aside
 for the after-school rush. We are seventeen:

masters of small acts of deception
 and hot shit besides in our hip-hung
 jeans and short shirts, dripping silver from arms, ears,
 toes and tongue. We watch the progress
 of a boy in Vans and low-slung jeans as he wanders
 aisles glittering with keychains and candy wrappers, collecting
 Slim Jims and chips on his way to the register, that slow
 dance with the law. Through the car's slitted windows
 the last of our smoke slithers into bathwater air,
 coiling blue and oily, our exhales saved
 for the moment when the clerk grazes us
 with his eyes, then slides the three hard packs
 across the counter anyway
 for the boy to collect, hand sweeping
 laminate like a palmed steering wheel,
 for his slow lope through glass doors and across asphalt
 back to us. For small victories.

After, we will sidewind up the mountain's
 switchbacks, ride its ridge to the overlook
 where the city flows out before us: its labyrinthine
 streets and sandstone spires, more rock than glass,
 its red-bricked rowhomes, its poured-cement
 factories hunched along the river
 with windows like long gray shattered eyes.

This boy tastes like possibility—they all do
 to Megan, mouths full of smoke and saliva and sharp left turns
 to fill up hollow afternoons. I will leave them
 in the car, balance on the road's crumbling WPA retainer,
 sucking down Salems, playing chicken with the treeline
 and tasting the hot convection of city and sky

while Megan burns holes in my backseat, turns bodies
into maps and presses on until she finds the key.

On each end the mountain falls down
to asphalt, city crunched between river
and rock. Seventeen, and Megan and I
already know: how to wriggle in sideways,
how some things you can't reach straight-on.

TORNADO SUMMER

The summer of '98 pregnant with them—
 a run of tornados blooming in the valleys
 of our Appalachian county, ripping through screens
 at the discount theater. Onscreen, Bill Paxton
 and Helen Hunt sparred over divorce papers
 and new lovers, dodging cones of air
 churning Midwest sod. At home, Tony scanned
 the radio, watched the Weather Channel,
 waiting for the good stuff, those white caps scrolling
 over blue. TORNADO SIGHTED. Touchdown.
 Then he and I, we'd rush to catch them in live-action,
 his green Ford pickup racing down Stoudt's
 Ferry Road, hemmed in by the Schuylkill
 River's brown liquid snake, watching triple tips spin
 down from the gray mass of sky on the other
 side. Up close, I've heard, they sound like trains.

Years later now, and miles removed, I ask myself,
 What impulse pushed us toward that horizon,
 what longing: for adventure, for destruction?
 If we could have, we would have driven right
 to them. On screen, Bill Paxton
 and Helen Hunt handcuffed themselves
 to drain pipes, both resisting and giving over
 to the wind that lifted them like a river current,
 that nonnegotiable surrender. They fell back
 in love with a force that could devour
 houses, tear up train tracks, destroy
 anything in its path. They got their
 happy ending. In the pickup, Tony and I
 sat and watched, waiting to race our tornados
 upriver, if they should turn.

BINGEWATCHING

In season 4 of the X-files, right after Scully
learns she has cancer, she takes off
for Baltimore, meets a guy, gets a tattoo
in some seedy parlor—one of those things
people do in movies, when suffering rushes
in like a tidal wave, filling their horizons.

An ouroboros, a serpent curled around itself, mouth eternally
devouring tail. And then when Duane Barry
abducts Scully—it's something to do
with aliens—her mother tells Mulder
a story about Scully as a girl, when she killed
a snake with a BB gun. How she held it,
crying over what she'd done. And watching this,
dozing and snow-headed on cold medicine,
I think how I didn't cry, that time I killed a snake
when I was a girl. Its body a gray ribbon cleaved
by my bike tires. I think how I only watched
it, as it curled around its wound, the thin spurt
of entrails pink and slippery on the asphalt,
watched the way it twined its head to tail, flicked
its tongue, as though it could taste its own pain,
as though it could devour its own death.

BABYSAT

I was four, maybe five, when my Aunt Terry
told me about the demons—the ones she saw
crouching behind curtains, hanging

in the shadows of her bedroom. We sat
at her kitchen table, set with plastic grapes in a wooden bowl.
Everything a still-life in her home, the conservatory

beside the front door planted with silk-leaved
trees, the dogs jumping at shadows, hanging
tails, slinking behind doors. You had to look

closely to see what was real, what unreal. She was joking,
I thought at first, when she told me how they waited
at night to hear her sleep-breathing, how they

tucked into the corners of light and dark, dropped
from shadows to take form. She insisted. There,
there—why could I not see them?

They were so adept
at hiding. What didn't I understand?
The fragile, dopamine-brokered truce

between sight and sense. How mutable life
could be, how unsteady its forms. She closed herself
in the bedroom and left me alone,

among the silk-leaved trees and live ones,
the plastic fruit and hardening
cheese, no way to force the world back

into perspective. Instead I sat at the upright piano
in the living room, all black-lacquered wood and gilt.
Feet dangling, I pumped pedals, layering notes

one on top of another, letting them stretch
the air, push out the ceiling, hold it up, cathedral-height.

ELEMENTARY EDUCATION

AIR

A diaphragm spasm is the technical term for getting the wind knocked out of you after a sudden blow to the chest, such as at summer camp when Nick Tezak hits you full-force with a fallen tree limb to make his friends laugh, or when someone you love tells you *I can't do this, anymore*.

EARTH

At the molecular level, all life on earth is composed of chains of carbon combined with other elements. Scientists assume that if life exists on other planets, it is also likely to be carbon-based. In third grade after science class I told my friend Liz Kelley that we'd buried my cat in the garden two years before with a bean bag I'd made in school the day he died. After that, every time she came over she wanted to dig him up. She'd disinterred all of her goldfish over the years, she told me, to watch the process of decomposition, to study their bones. I told her that goldfish are different than cats. To which she replied *I don't see how*. On a technical level, I suppose she was right.

WATER

If you're ever stuck on a lifeboat in the ocean without fresh water, one solution is to use a tarp to filter sunlight, evaporating surface water and collecting the condensation to drink. I learned this from a young Ben Affleck in sixth-grade science. Every Thursday when the lights went off to watch the PBS show the *Voyage of the Mimi*, while Ben Affleck learned about whales and water distillation, the boy next to me spit in his hand and rubbed himself below the surface of our shared black lab desk. Which is how I learned about that, too.

FIRE

Phase transition is the process of converting matter from a solid to a non-solid state through the application of heat. In middle school my cousin knew a kid who set an abandoned warehouse on fire. He said it was an accident: he'd flicked a lit cigarette into a pile of trash. After the warehouse burned down he had to find somewhere else to smoke. Years later when I sat in the Berkshire Mall parking lot and watched the mountain behind the city flare red along its one-mile length, arcs of water turning to steam over the flames, I wondered if he'd found a new place after all.

THE DREAMLIFE OF ANGELS (1998): SCENES

A portrait: Me at 16, too dumb to know that when a review says a film is French, that means it will *be* in French, means that the actors will slouch their way through round vowels and husky consonants, means I will have to lean back and forth in the back row to catch the meaning rippling past the silhouettes of heads in front of mine.

The back row at the Kutztown Grand: Seats scratchy, '70s upholstery. Red. Stiff armrests, stiff backs. The fifteen miles to the theater takes thirty minutes to drive, country roads slicing corn fields, stubbling them with antique malls and grain silos, old barns. An abandoned cemetery rimmed in granite, tombstones streaked.

The words on the screen: Yellow. The palette: muted. Isa and Marie are roommates. They work together in a factory and smoke each others' cigarettes. Isa visits a girl in *hopital* and reads to her. They complain about work and men.

The boy I'm with: Does he favor the ice-blond Marie, or Isa, the brunette, the pixie-cut *waij*? When Marie takes a lover, he puts a hand on my knee. The affair unfolds with typical French frankness, with *insouciance*, with *fait accompli* and *c'est la vie*. What does he think, when Marie's lover then leaves her? When Marie, despondent, drops to her death from the apartment window? Her slim crescent back curving through the frame and falling from sight. When Isa gasps. When I jump in my seat.

The street outside: Me, apologizing for the French, for the long drive that made us late, for the shabby theater and the back row with its lack of leg room.

What I don't know how to apologize for: The awkward revelations—that love can end badly, that a person can vanish just like that. I want to say, this is new to me too. How life delivers its surprises—French and awkward revelations, love and sex and death. How they feel like sucker punches, how they take your breath away. I want to say: I'm sorry for the long drive home, for the long moments of silence that will fill it.

III
EXPERIMENTAL METHODS

MANGOS

He taught me to salt
 mangos like his mother
 did to choose fruit heavy

with juice fingers
 palpating rainbowed
 skin to slice flesh

along unseen faults to feel
 edible from inedible in
 splintering knife-point

incisions narrowing
 to woody core He taught
 me the taste of blood-sweat

mineral mingling with sweet
 juice running to the V
 of finger webs to strip

thick tortoiseshell skin
 dull echo of dawn flesh
 He taught me what's left

tamed mounds split
 into slices juice darkening
 bamboo cutting board

the pile of orange flesh
 divided so much abundance
 whittled down to this

WORRIES

I worry about the hostas in the garden
 pushing their fierce, dragon-horned shoots—
 meant to uncurl to leaf
 in May's long warm exhale—
 through the warmed soil of a false spring

I worry about the furnace, the oil-primed hiccup
 before the pilot ignites,
 about the lease, bank ledgers, my sister's
 college fund, my mother's slow
 eyesight, my brother's tarred lungs,
 those sad-eyed children in junk mailers
 from Christmas charities, peak oil

Italian *nonnas* teach their daughters to fold up their worries—to write
 out names on slips of paper, torn curling-edged from notebooks, to line
 them up in neat rows of delicate blue:

one for the boy who teased you
two for the girls who laughed

and stow them, origami-caged, in the ice box.

I worry about private mortgage insurance, about lopped-
 off mountaintops in West Virginia, about the last
 mountain gorillas, about my sister dodging
 eyeballs by high school lockers,
 the daily influx of mail, the jury
 summons I've forgotten, my husband's
 heart, the empty swing of the *for sale* sign in the yard,
 the tenderness of helpless things,
 early frost

When I was nine my Oaxacan *madrina*
 gave me a set of worry dolls to place beneath my pillow,
 thread-twined, fingernail-sized, tiny stitched mouths open to drink
 childhood worries by night.

Yesterday I found them while packing for the move, nestled in their straw
box in the spare bedroom
beside my grandmother's perfume, rosary
beads from Rome—their stitched eyes
dots of black in dust-browned faces, their mouths ajar, arms still stuck
spread open, waiting.

POPULATION VIABILITY ANALYSIS

The viability of a population is defined as the probability that it will not go extinct during a fixed time span given the current population size. Population viability analysis (PVA) is the methodology of estimating the probability that a population of a specified size will persist for a specified length of time. A stochastic PVA, incorporating variance, can be expressed by the following formula, where $R = b-d$ (births minus deaths).

$$N_{t+1} = N_t (R+1)$$

— Gary C. White, Colorado State University

Two populations divided by a geographic feature
may be at risk for extinction
even when they exist
at sufficient breeding numbers. Let's say,

for instance, the island fox of Catalina:
divided by an isthmus, each he snuffling

for a she, his persistence
mapped in the probability of N traversing
the bottleneck of R,
the stochastic variance of chance

encounters. Or the prairie grouse,
each clutch of newborn chicks islanded
in a sea of wheat fields
and asphalt corridors;

or, if you prefer

instead, the Fender's Blue butterfly, each single arthropod flitting
from one lone stalk of sulphur lupine
to another. Map

their chances
in substitutionary arrangements, stuttering
black digits across the white field
of pages. But I find it hard

to care, sometimes, about butterflies, or foxes—

if N is my attention divided
by the correlation of knowledge and abstraction,
then let X be my guilt over Y, my failure

to worry enough about butterflies, despite the probability
that their crescent-moon-wings will fade
to R approaching zero. Because what I really worry about

is us, in our glass-walled buildings,
sealed off in our cells of light.
And what I really want to say is something
about he & I

divided by the wide shelf of continent, the gulf
of daily life, all those piled-up minutes, but—

is that too easy? I can't force
this metaphor
to equate.

MILK

The thick white clots of cream
dissolve the way a city would:
mushrooming up,
a cloud billowing white
through brown.

But milk is nothing
like a city. And words,
they're nothing like a bomb:
the way

they repeat, repeat,
until all meaning
falls away. So where does that
leave us? Let's try

again. When cream goes it leaves
traces of itself behind:
olive-hued globes
of fat floating
over the surface. That

tender alchemy: how
one form can give way
to another
and another can rise.

ttttttttttttttttttttttt how do we decide ttttttttttttttttttttttt
 ttttttttttttttttttttttt which ttttttttttttttttttttttt
 ttttttttttttttttttttttt **tt** ttttttttttttttttttttttt
 ttttttttttttttttttttttt **tttt** ttttttttttttttttttttttt
 ttttttttttttttttttttttt **tttttt** ttttttttttttttttttttttt
 ttttttttttttttttttttttt ttttttttttttttttttttttt
 ttttttttttttttttttttttt ttttttttttttttttttttttt
 ttttttttttttttttttttttt ttttttttttttttttttttttt
 ttttttttttttttttttttttt **tttttt** ttttttttttttttttttttttt
 direction **tttttt** ttttttttttttttttttttttt **tttttt** best one
 is the ttttttttttttttttttttttt **tttttt** ttttttttttttttttttttttt to
 ttttttttttttttttttttttt ttttttttttttttttttttttt
 ttttttttttttttttttttttt ttttttttttttttttttttttt
 ttttttttttttttttttttttt ttttttttttttttttttttttt
 ttttttttttttttttttttttt ttttttttttttttttttttttt
 ttttttttttttttttttttttt **tttttttt** ttttttttttttttttttttttt
 ttttttttttttttttttttttt **tttt** ttttttttttttttttttttttt
 ttttttttttttttttttttttt **tt** ttttttttttttttttttttttt
 ttttttttttttttttttttttt take ttttttttttttttttttttttt

MORNING GLORY

It's my fault—I planted the vines,
 scored the seeds,
 erected the trellis,
 directed each twining tendril
 through each diamond gap. I watered
 the vines through summer,
 encouraged each scrolled leaf-bud to spring
 into open-hearted form. I watched
 vines split into trident bud,
 waited for the revelation,
 the dawn hour when they untwisted
 reluctant horns, opened
 floral trumpets to proclaim
 morning's arrival. And now, I've reaped

the rewards: shower of sickle
 seeds over pavement, horned feet
 digging into moist soil,
 green hoofs erupting
 between hollyhock, vining
 apple tree, swallowing phlox, choking
 iris, their blue-pink chorus
 resounding judgment
 from every corner.
 Always the hardest lesson for me to learn:
 that some things don't deserve that much love.

A PRACTICAL FIELD GUIDE FOR RESEARCHERS HANDLING A BREAK-UP

15.4.2 Primate dispersal patterns

Primate social structures are highly influenced by resource availability. When resources are scarce, females will invest preferentially in offspring of the sex that disperses from its natal group, conserving resources for those who remain within the primary social group.

But I was never scarce with him—and in the end,
wasn't that the problem?

People grow accustomed to a certain level
of investment, a certain routine:

loaded dishwashers, cooked meals,
who-will-pick-up-the-coffee

when we run out, and who-will-pick-up-
the-phone when

the plumber needs calling, the mortgage
needs sorting. We only have

so much to give.

Conversely, when resources are plentiful, high-ranking females will invest in offspring of the sex with the highest chance of reproductive success, regardless of dispersal patterns. In this way, resource availability dictates the makeup and distribution of social groups within a given range.

Before the separation,
before the division of his and mine and ours

(and isn't that such an easy way to phrase it,
as though television, sofa, kitchen table

were not also a portal to a thousand
weighted memories, each separate

item tethered to a thick coil
of associations, an endless unfolding

of mutual usage),

Some primate species, such as chimpanzees and perhaps early hominids (the precursors to modern humans), form a large social network comprised of individuals who split off into smaller groups throughout the year, reforming with the larger group only in select seasons, based on resource availability.

I used to have the same
dream over and over again. In a house

that wasn't mine, I walked
the halls, the bedrooms, touching things—

a soft-bristled hairbrush, an embroidered
towel, a bar of perfumed soap—

as though looking for something
particular in the odd assortments

of another person's life.

This loose association of individuals is called a fission-fusion system. In populations which operate across a wide geographic range, it can be difficult for researchers to determine which individuals make up the larger social group.

After, I woke
to his same body next to mine, his same

feet tangling the sheets, letting in pockets
of cool air to mediate the warmth

of his skin seeping into the cotton,
spreading to my own. Always

the uneasy alliance—hot and cold, waking
and sleeping, the pressure

of the body, and the weightlessness
of its absence.

IV

WEATHER SYSTEMS

PRAIRIE

I admit, I find the prairie ugly: that wide
drop-cloth draped

in ragged bunches, seedheads popping from autumn-
dry grass, frayed

from a summer of bees, birds, wind, all those needing
fingers, that

hard-using. Seedpods split, spool white threads to wind, which
doesn't care

whether it lifts or tramples the offering. And
what of it,

if people
can be that way too, sometimes? We needn't embrace

indifference.
You see, I have a lot to say on the subject.

My mother
would agree. You'll drive yourself crazy, she says, voice

belaying
over miles, cell phone towers, pinging across

prairie. Things
are the way they are, she says. You need to learn to

let things go.

REGISTERED PAINT HORSES FOR SALE

reads the sign on Route 17
where its asphalt overlays gravel
twelve miles south of town

red stencils across
a yellow background

nothing else around

not horses, not

buildings or people,
just snapped-off corn stalks,
chaff stippling black dirt, a cloud
of dust hanging

in the wake of an
already-passed vehicle

this place suffers from an excess

of space, sky floating miles
off the ground,
bending to the convex horizon
with nothing

to hem it in, keep
it from spilling like water
from the lip

of a glass
in the distance

silent turbines
beat heavy blades

here, only road divides
east from west

PUGET SOUND

after Mary Oliver

I

Understand that I am always searching
for some impossible place
where contentment is a quality
like iron, or oxygen: absorbed

through the lungs, pulled up
from soil, thoughtlessly.
And so when we arrived at SeaTac
I felt, again, the hope of it:

the rental car with the tree
growing through the center
of its plates, and the promise
of rest, free

II

from the ceaseless humming
of everything. The wavelets
tended beach in the sound,
opening and closing trapdoors.

Nothing enters or exits, only
endless movement and murmurs, like
a secret breathing beneath small
talk. A friend tells me how the worst

part of depression is knowing
that it will always come
and go, each upswell tempered
by the knowledge of its undertow.

III

A week later I will be puzzling
out the message in a mineral-leach
on a sacred cliff. We will enter our campground,
pitch our tent, and I will want to be alone.

I will recognize this means I no longer love
him, and I will sit
in that knowledge, unable to do anything
but surge and recede, silently.

IV

My friend tells me that when she stood
on the bridge where she intended
to die, she felt the wind and the weight
of absence ahead of her: the action

of the water, the way ripples
would form and close
over her head, hiding her moment
of decision forever. The outline

of all things becomes clear in hindsight.
How an egg is perfectly whole, until it breaks.

BIOLUMINESCENCE

This way, says the woman
 in scrubs with palm trees
 printed on them. She points:
 a cluster of chairs, a magazine
 stand and potted plant,
 leaves browning at the tips.
 In those wide photos of the world
 at night, this city glows

like balled lightning, flashing down roads
 stretched tight across the plains.
 In those photos your eye always travels
 first to the light, hot white webs strung
 across the familiar outlines
 of land meeting ocean, before it turns
 to the flat blue center
 of continents, where nothing
 is lit but wrinkled mountains catching
 the faint blue wash of revolving starlight.
 My friend has been swallowed

already by the hallway, disappeared
 down its thin-carpeted run. Somewhere
 past rows of double doors that swing
 open *for authorized personnel only*
 she lies stretched on a metal
 bed, waiting for the waves
 that will map her secret interiors:

veins unfurling like rivers
 of light, bones cored with clustered galaxies.
 We can't abide the darkness;
 even our bodies rebel, discover light
 where there is none, ingest
 illusion over fact. Behind glass

at the natural history museum,
 she and I thronged with the crowd
 to see the pale glowing outlines

of jellyfish emerge from formless darkness, drifting
through a sea of reflections. Glowworms
dripped from the ceiling
like strands of blue pearls;
aqua-green mushrooms unfurled
luminescent caps. All these sightless
creatures gifted light, as though it
were a blessing achieved through the purging
of desire for it. Later, alone, I

walked down a hallway
that fell into darkness like a lead-
lined cave, walked with all my animal fears
held tightly to my chest, hand trusting
the wall as it disappeared from sight, until
that too ran out, and I stepped
into a canyon of nothing.
Unmoving, I tried

to feel its volume on my skin, discover
senses that could measure the heft of absence,
strained my eyes until shapes emerged
from the dark: shifting pulsars, faint lights beating
white and red against my pupils.
An illusion:

before I turned back I gave in, lit
the space with a square of neon
light, and learned the shape of nothing:
a plain white wall curving ahead.
Infinite blankness. This room now

where I wait is muted, voices
hung at half-volume, phones
ringing lightly, soft-soled
shoes scuffing rapid steps
across the carpet. Behind
the walls my friend waits
on her white bed,
for illumination.

ROCKY MOUNTAIN NATIONAL PARK

May, 2015

In proportion to the landscape we are nothing;
but we all live

in proportion
to our space. Next to a mountain I am beyond

inconsequential. Captured in the glass
of a camera lens

he & I boil down
to a collection of shadows. Victorian spirit

photographers charged ten dollars
per photo of ghost

hovering behind living
person. People pay for hope, a trick of light,

of film exposure. This is the moment
I keep returning to:

he & I & a two-foot-wide gap
of open landscape, the epic heft of the Colorado

plateau between us. How happy he looks
in that photo

as though
he could reach through that space, take

my hand, those fragments of bone and light.

3-D MODELING

After the storm that destroyed my house,
 I watched videos online. The weather center
 at some Midwestern university, posting
 three-dimensional recreations
 of sudden weather events: tiny railroad houses
 engulfed by machine-fog, like the drift
 of dry ice mist at childhood Halloween
 parties. I watched the gathering swirl
 of wind, the sudden downdraft,
 like an atomic cloud in reverse, reverent
 with new understanding. *No wonder.*

Except: in the models, no burst windows,
 no missing tiles from the tiny roofs,
 no insurance claims, no downed trees
 or house fires, no plywood sheets
 papering the tiny windows. Only:
 the swirl, the sudden burst. And then
 the mist vacuum-sucked to wherever
 it came from, and the house emerging

again: still picket-fenced, still
 model-train precise. After the divorce
 I thought about that house, that storm:
 How hard I fought to break free,
 like flower petals pushing through sepals,
 like a chick inventing its own birth.
 And then how clean everything looked
 in hindsight, how intact. Like I
 could walk back in that tiny door,
 like I still held its model key.

BUSH BABY, YOU

Bush baby, you have ET hands
 and a stuffed-animal face: frog-palmed,
 fingers flared soft and thick
 as jelly shoes. Drew Barrymore,
 still young and pig-tailed then, would have

loved you; she'd keep you in her
 closet, feed you a diet
 of Reese's pieces and apple slices.
 I would have loved you too, when I
 was young: a stuffed animal

from a zoo gift shop, or our hotel
 in Orlando the summer we visited
 Busch Gardens. Picture it: you,
 somewhere in the canopy below
 us, the false savannah beneath

the monorail, or the conservatory
 in the hotel lobby—beside the toucan.
 Us: in our room, feeding wandering
 ducklings bread crumbs from our hands.
 Bush baby, my grandmother too

had an ET face: square, big-
 eyed, the resemblance so
 uncanny both my cousin and I
 dreamed she was an alien
 that night we watched the movie.

She had five daughters, and we were
 their feral offspring, gleaning
 from the clear-cut tract of our
 suburban habitat a diet
 of television shows and movies,

heads stuffed full of Nintendo
 dreams and Halloween visions, sugar-
 spun and technicolored. Spielberg

loved the suburbs, those rows of Pez
dispenser homes. Bush baby, you live

in forest fragments, clinging to trees
with gummy-worm fingers, sleeping
through daytime talk shows. The night
she died—my grandmother—was the night
after Michael Jackson. We sat

in folding chairs on her front lawn,
eating pizza and drinking
Pepsi, watching him Moonwalk across
cell phone screens, trading *tee-bees*
to the backbeat of her

respirated breathing.
Everyone forgets he did
the soundtrack to *ET*, someone said,
and someone else said, *Everything*
is splintering now. And they meant Michael

Jackson, meant the Quincy Jones-
produced togetherness
of sixty-five million people all
with the same song thrumming
on repeat through their brains, but

it seemed truer than that, somehow.
How loss is a kind
of fragmentation, how things
always pull apart. Bush baby,
you cling to falling trees. In ten

years you'll no longer be a wild
thing. Maybe then we can quantify
your value: the price
of a zoo admission, twenty-dollar
parking. The world is a riot

of marvels, and we use it
like a carnival ride.

But, bush baby, you already know that,
don't you? Let me tell you
something: When I was a girl

I paid ten dollars every year
to save the rainforest. But it meant
nothing, then or now—or maybe it did.
I can't test the hypothesis
of childhood belief against

the slippage of time. My grandmother
died with all of us around her
bed—aunts, cousins, nieces, nephews,
crowding her first-floor bedroom. I held
her hand. She couldn't speak,

but someone saw that she was crying.

FOSSIL HUNTING

Sun splits the sky, the kind of day
 where it squats on the horizon and hovers,
 pouring light and heat sideways through blinds,

car windows: ours. They are widening
 the highway here, swan-necked excavator
 dormant beside construction slag in the rutted

lot of some diner no one eats at anymore,
 I'll bet. Sun-flash off the trunk, tools clutched
 in Tony's hands. Hammer, Phillips-

head screwdriver. This is not an official
 operation. I lag, flag, while veins cord beneath
 his sun-brushed skin. They twine, branch over lean

muscle beneath the sheen of sweat, screwdriver
 pickaxing piles of stone. We used
 to dynamite our way through, I say, a hundred

years ago, but now it's all steel teeth and grinding
 where rock doesn't match blueprint—
 progress. I see, he says. Say what

does the blind man say, when he picks
 up his hammer and saw? Nothing. An old
 joke. Nevermind. Exhaust thickens the air. What

are we looking for here, anyway? And how
 will we know when we have found it?
 I am sun-scoured. I need water. Tony is tired

of complaints. He lopes off, long body silhouetted
 against sky, summiting boulder pile,
 disappearing down the other

side.

This is eternity, at my feet:
the crumbling record of abundance, sun-
warmed, the long calcification of time

and life into stone. It seems impossible,
that these stones have held together so long—so long,
a hundred million years—and now, dislodged,

they crack along a dozen seams. I don't need tools, just
my hands to pry them open, footlong sections flecked
with shellprints: fanned, scalloped depressions,

nautilus swirls, rock ridged like tree bark and veined
blue-gray, red, gold. Tony picks his way back down
the cliffside, feet sliding through pebbles. Say what

does the blind man say, when he knows
that he is wrong? I'm sorry. It doesn't matter,
anyway. Tomorrow will rise after

today, and another tomorrow after
that. In this today we pull stone apart together,
again, again, hands reddening, fingernails

chipping, until we have uncovered hundreds
of fossils—too many. Our bag overflows.
We can have our pick, take what we want

and leave the rest, uncovered.